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IMPORTANT

PAGES 16 AND 18 WERE ADDED

THEY ARE NOT PAGES IN THE REPORT

THEY SHOW DETAIL UNREADABLE ON

PAGES 15 AND 17

Diag. Cht. Nos. 1253 & 1254

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, *Director*

State: Florida

Acc. No.

DESCRIPTIVE REPORT

~~*Topographic*~~
Hydrographic

Sheet No. 5056

Project #48

LOCALITY

West Coast

Seminole Pt. to Lopez River

1930

CHIEF OF PARTY

B. H. Rigg

U. S. GOVERNMENT PRINTING OFFICE: 1930

5056

5056

Form 537

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5056

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. ~~T4452~~ Project #48

REGISTER NO. 5056

State Florida

General locality West Coast

Locality ~~Chatam River~~ Seminole Pt. to Lopez River

Scale 1:20,000 Date of survey Jan- Feb, 1930

Vessel Chartered Houseboat "MYJO"

Chief of Party Benjamin H. Rigg

Surveyed by Benjamin H. Rigg

Protracted by Fred Natella

Soundings penciled by C.E. Morris

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated December 6, 1929

Remarks: Boat sheet & Smooth sheet for this work Was furnished by the Washington, Office. (T-4452 Aerial)

U. S. GOVERNMENT PRINTING OFFICE

Descriptive Report

to accompany

Hydrographic Sheet ~~No. 4452~~ 5056

Chatham Bend River.

Instructions dated
December 6, 1929.

LIMITS:

The limits of this sheet are Lat. 25° 36' Lat. 25° 49' Long. 81° 09' - Long. 81° 22'.

The area of this sheet includes Chatham River, Heuston River, Heuston Bay, Oyster Bay, Sunday Bay, Head of Lopez River, Chevelier Bay, Cannon Bay, Alligator Bay, anchorages at Duck Rock, Snake Key and Seminole Point, known to many guides as Pluver Point.

SURVEY METHODS:

Triangulation signals, MORMON, CHAT AND DUCK were recovered and from these three points, sextant cuts were taken on other signals built. Signals in the rivers and bays were located by identifying points on the boat sheet. In the survey of the anchorages signals were built and three point fixes used. Whenever a tangent or point had an outstanding tree, rock or bush no signal was built.

In running the rivers, Chatham and Heuston, the range finder was used to some extent, the brush along the shore was so thick that too much time was required to make measurements with the range finder and in most cases distances were estimated.

Names of islands shown in red are surveying names. And must not be mistaken for new place names.

A portable tide gauge was installed at the mouth of Chatham Bend River and a staff was erected near the mouth of Chevelier Bay. Comparisons were made with the standard gauge at Everglades. From the automatic gauge and the staff at Chatham River, reducers were obtained for all this sheet. The tide staff readings were used for Lopez River, Sunday, Oyster, Heuston, Chevelier, Cannon and Alligator Bays.

Tides were proportioned for the lines run in the rivers, using a proportioned curve for each mile between the gauge at the mouth and the staff. Three bench marks were established at the mouth of Chatham River. The ground in the vicinity of the staff was nothing but a swamp covered with water and over grown with mangrove making the placing of marks impossible.

INSIDE ROUTE:

The inside route from Lopez River has a shoal spot at Lat. 25° 48'.3 Long. 81° 17'.7. This shoal extends across the river at this point. A close examination was made and no channel deeper than 2 feet could be found. From this point 3 feet can be carried across Sunday Bay, at the south end of the bay the channel winds through a group of small islands with numerous oyster bars. One pass goes down through Houses Hammock into Heuston River. This pass has numerous shoals and bars, but 2-½ feet may be taken through. The main inside route passes through Oyster Bay with a general depth of 3½ feet. Several small oyster bars in this bay are shown on the boat sheet.

2 controlling depth - 2'

Heuston Bay is practically free of bars, and carries 3½-4' feet. The entrance of this bay from the north is through a channel

2 to 3 meters wide carries 2½ feet. Heuston Bay is really in two parts, the north part has two passes, one on the west side leading into Heuston River, with 2½ feet, and one ~~river carrying~~ at the south end which meets main Chatham Bend River, here a large shoal with 1½ feet over it limits the depth.

The inside route from the north to the south part of Heuston Bay follows a channel close in to the south bank carrying 3½ feet.

From the south east corner of the bay three feet may be carried into Chatham River and Chevelier Bay. Chevelier Bay is a mass of oyster bars. By carefully feeling through three feet can be carried through the bay. This was the most difficult area of the whole season to work. The guides living in this locality know of no channel through, but simply run aground, back off and try another spot. The route as shown on the sheet will miss all bars if followed exactly, but the passes between are so narrow (2 meters), and the turns so quick, they could not be plotted with the methods used by this party. As the bay is not used by any one in a yacht it was felt that further time would not add anything to the information already shown. The northeast end of Chevelier Bay is full of bars and shoals closing it at low water. The channel to the south passes along the south bank into Cannon Bay.

Cannon Bay has a general depth of three and one half feet and has few bars. All bars known to the guide were located. The route

passes out through the south end of this bay through a narrow un-named bay into Alligator Creek. A bar on the north side of this entrance was sketched in.

Alligator Creek is almost unpassable to a guide boat, (18' open boat drawing 2'). Recent storms have blown a number of trees into the creek; to add to this the growth along the banks has gradually extended out. The larger trees have been cleared away and by careful steering we were able to run one line through. No one but Indians use it now.

Alligator Bay has a general depth of from 3 to 5 feet. An attempt was made to run a line into the entrance of Plate Creek at the southeast end of the bay but it was found to be completely blocked. Two feet was as near as we could estimate the soundings, due to a layer of very soft mud, three to four feet deep. A photo included in this report shows the entrance.

Entrance to Chatham River passes over a wide bar with three feet at low water. Once over the bar three and one half feet can be carried into the river. Numerous bars and shoals make a pilot necessary to run the river with a yacht. Yachts never go any further than the entrance to Chevelier Bay, two feet may be carried this far. The shoalest spot in Chatham River lies in Lat. 25° ~~48.1~~ 41.8 Long. 81° 16.6'. In this locality, the channel as found by the party is only 2 feet deep and very narrow; the deepest water lies close to the island lying on the north side.

CHATAM RIVER ENTR ↗ LOOKING WEST

PLATE GREEK ENTRANCE

TIDE GUAGE CHATAM RIVER

The channels are so crooked and narrow that a guide familiar with them finds it difficult to keep in the center. It is difficult to survey them on the scale of the boat sheet with any degree of accuracy.

Heuston River is more difficult than Chatham. Oyster bars and sand bars are spotted all along the river. The entrance is crooked and narrow and from guides familiar with the country the statement is unanimous that the river is never used by yachtsmen because no one has been able to find a channel. A search was made for an unobstructed passage but none was found. The work done will give an idea of the character of the channels. Chatham River can be navigated at low water by an experienced guide, but my opinion is that Heuston cannot.

2 ft 1½ feet can be carried in this River. A.L.S.

ANCHORAGES:

The anchorage at Duck Rock is used frequently by yachts bound up and down the coast. It has a general depth of four feet and is protected from the northwest and west. The only bad wind in this anchorage is south.

Anchorage at Turkey Key is used by fishing boats. A fish house is located in the protected part of the harbor. This house was located by sextant angles. These were plotted on the smooth sheet.

Several lines were run to the north of Seminole Point. The protected part of the anchorage has only 2½ feet of water. This point was known to my guide as Plover Point.

DISCREPANCIES:

Slight errors in judgement in the narrow crooked channels in several places on this sheet show a difference in depth.

These differences are only a matter of one foot and in most cases only one half foot, they were not picked up until the soundings were reduced. The peculiar tide condition necessitated having both tide gauge records on hand when the reducers were figured. By the time the reducers were obtained and plotting was accomplished the party would be moved to another locality and the tide gauges taken up. Time did not permit running the lines. As the primary object of this survey was to obtain a general idea of the existing depths it is felt the work done accomplished this:

There are three bad crossings on this sheet.

29b-30b 5½'	32f-33f 5½'	10g-11g 8'
60a-61a 2½'	35f-36f 3'	31g-32g 3'

The probability of a bad position location, faulty sounding, has been considered in these cases and no error can be found. The shoal soundings are due to the numerous lumps found in this locality. The shoal soundings should be plotted.

GEOGRAPHICAL NAMES:

New names added: in local use

Snake Key, Duck Rock, Turkey Key, Plover Key, Alligator Creek, House Hammock Bay, Plate Creek, Gator Key Bay and Sweet Water River.

Heuston Bay is spelled Heuston. Pelican Bay.

Heuston. Local Office
" 1254
use in Inlocon

Authority: Jack Daniels, Guide, Everglades.
Arthur N. Wintle, Guide, Fort Meyers.

Respectfully submitted,

Benjamin H. Rigg,
Chief of Party.

B. H. Rigg.

STATISTICS TO ACCOMPANY
SHEET T4452

Date	Vol.	Letter	Miles	Soundings	Positions
Jan.23	1	a	14.9	703	74
24	1	b	17.4	862	93
27	1	c	12.7	538	48
28	2	c	2.1	119	11
28	2	d	36.8	1452	121
29	2	e	13.2	595	62
	3	e	10.6	1079	93
30	3	f	25.3	1100	113
Feb. 4	4	g	28.7	1099	114
5	4	h	3.8	173	21
			165.5	7720	750

SECTION OF FIELD RECORDS
REPORT ON SHEET H-5056
SEMINOLE PT. TO LOPEZ RIVER, FLA.

Chief of Party – B. H. Rigg
Date Surveyed – Jan. – Feb., 1930
Surveyed by – B. H. Rigg
Protracted by – Fred Natella
Soundings plotted by – J. E. Morris
Verified & Inked by – Harold W. Murray

1. The records conform to the requirements of the Hydrographic Manual.
2. The plan and character of development fulfill the general requirement.
3. The plan and extent of development satisfy the specific instructions.
4. The sounding line crossings are adequate.
   a. Several bad crossings are present. They are mentioned in the descriptive Report.
   b. It is believed by the Chief of Party (now in the Office) that the shoal soundings in the crossings are accurate and represent numerous humps

typical of this region.

c. Position 30a (Vol. #1) in lat. 25°41'-25" and approximately 200 meters south of signal "mag" is questioned because of the large disagreement in time.

5. The usual depth curves can be completely drawn within the limits of the scale and specific instructions. The 3-ft curve has been added by special recommendation.

6. It is thought that the general development could be increased, particularly that of curves and crossings in congested areas if the plotting had been done on a scale of 1 to 10,000 rather than 1-20,000.

7. The field plotting was completed to the extent provided in the Hydrographic Manual with the exception of plotting bottom characteristics, art. 160d.

a. All shoals developed or modified by the field party on the boat sheet were transferred to the smooth sheet by the reviser.

8. The field plotting was fair. The majority

of positions were obtained by bearings and perpendicular offsets. Nearly all of these positions were inspected & checked tho not noted in the records nor on the statistics sheet.

9. Several rock symbols occur on this sheet. At first thought the presence of rock in this locality is discredited but according to the Chief of Party (now in the office) rock shoals in some places is only a few feet underground. This rock is composed of shells and frequently used in crushed form for roads.

10. Attention is called to two notes in the records.

a. The island noted in Vol. #3, page 43 was located by the field party and not shown on the topographic sheet. This island was transfered from the boat sheet to the smooth sheet by the verifier.

b. The second note is found in the index of Vol. #4 and covers the subject of names. New names added to the sheet

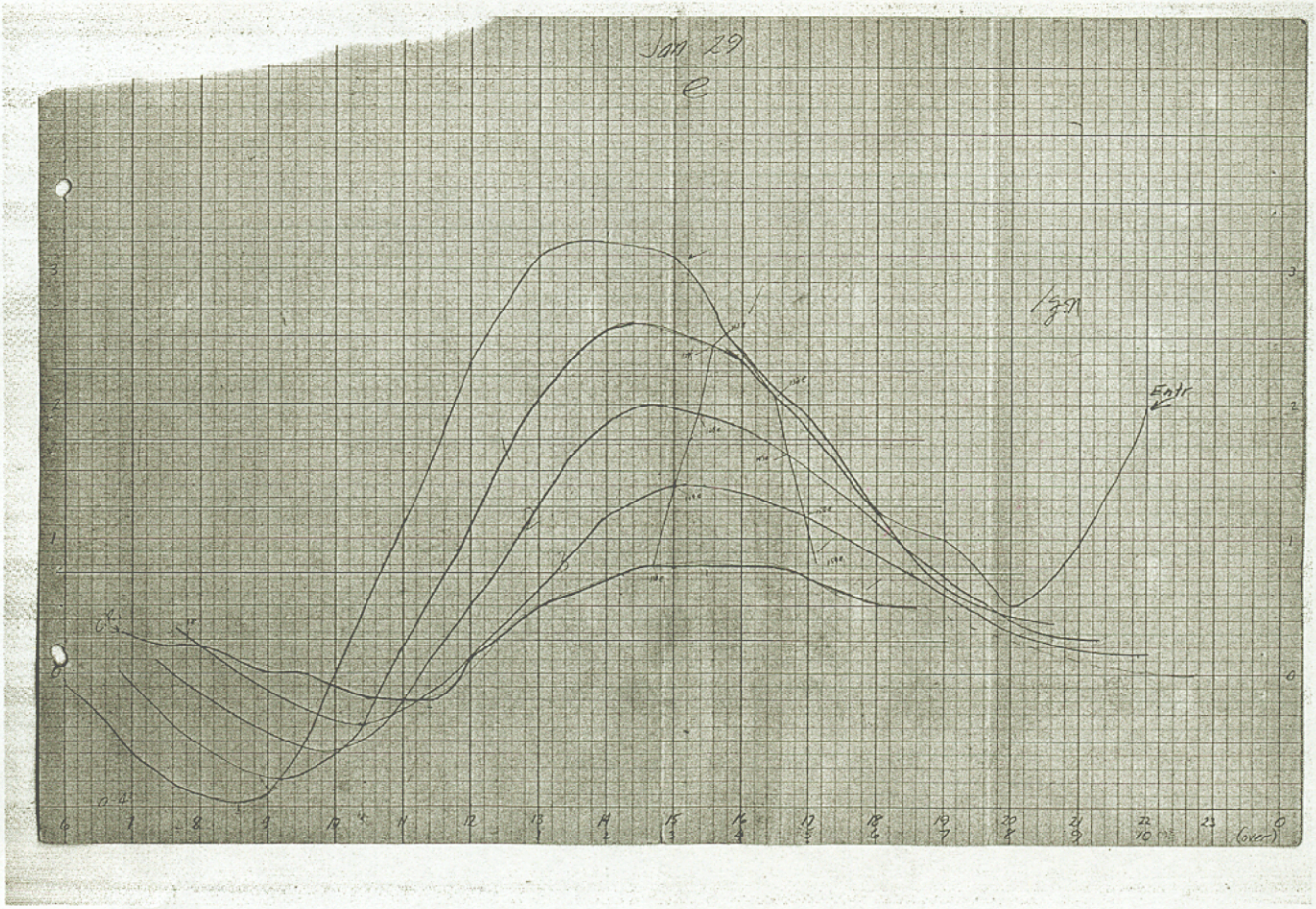
in black are listed in the Descriptive Report. The names of islands noted in red are solely for the assistance in development and verification and are not to be regarded as new names.

11. The junction on the north west with H.-5049 could not be made as this sheet is in process of verification. Additional junctions are not available at present but are expected soon.

12. No comparison was made with previous surveys because of the lapse of time. However, prolonged bars in some places are substantiated by H-2010 (1890).—

Respectfully submitted— Feb. 21, 1931

Harold W. Murray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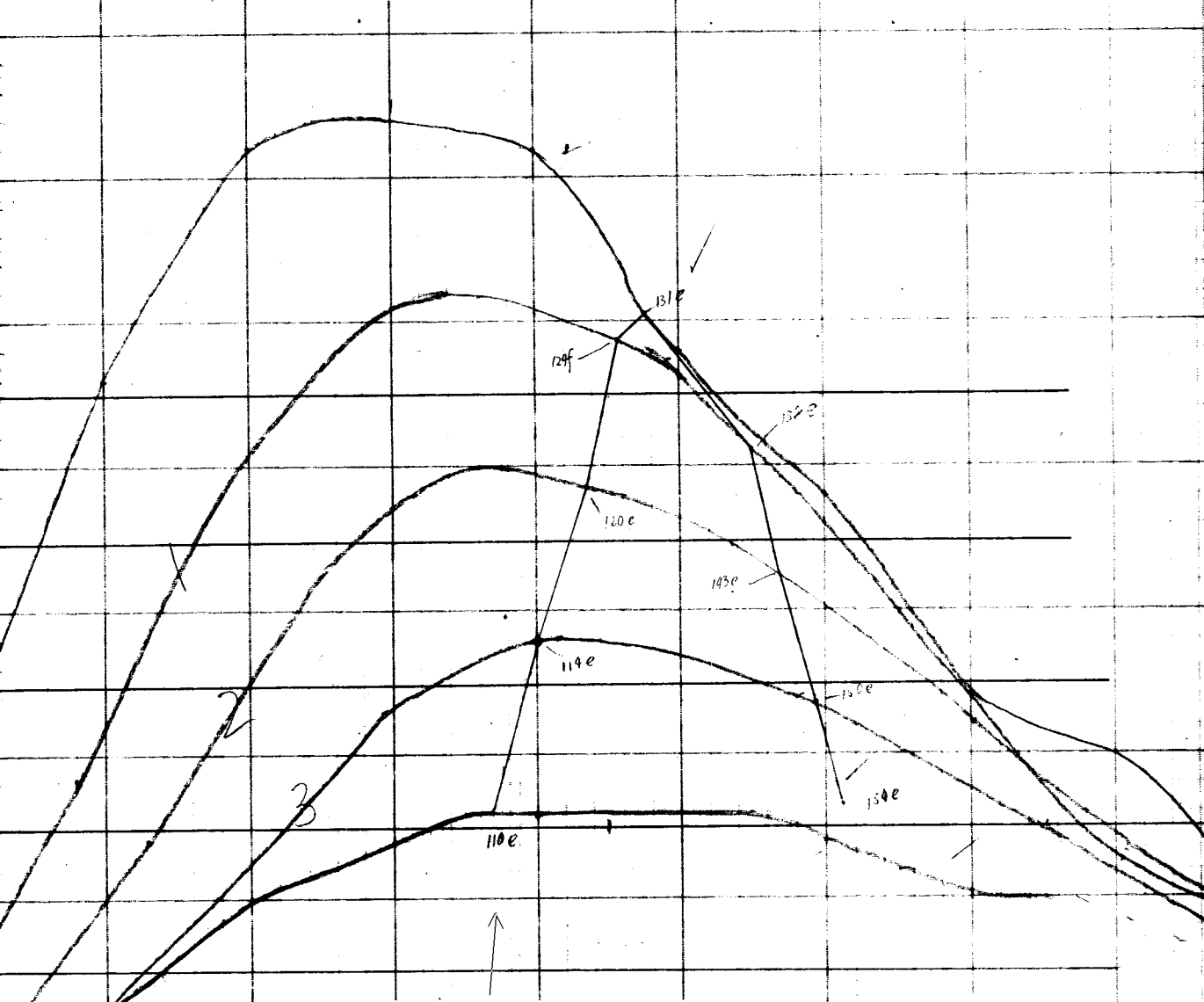

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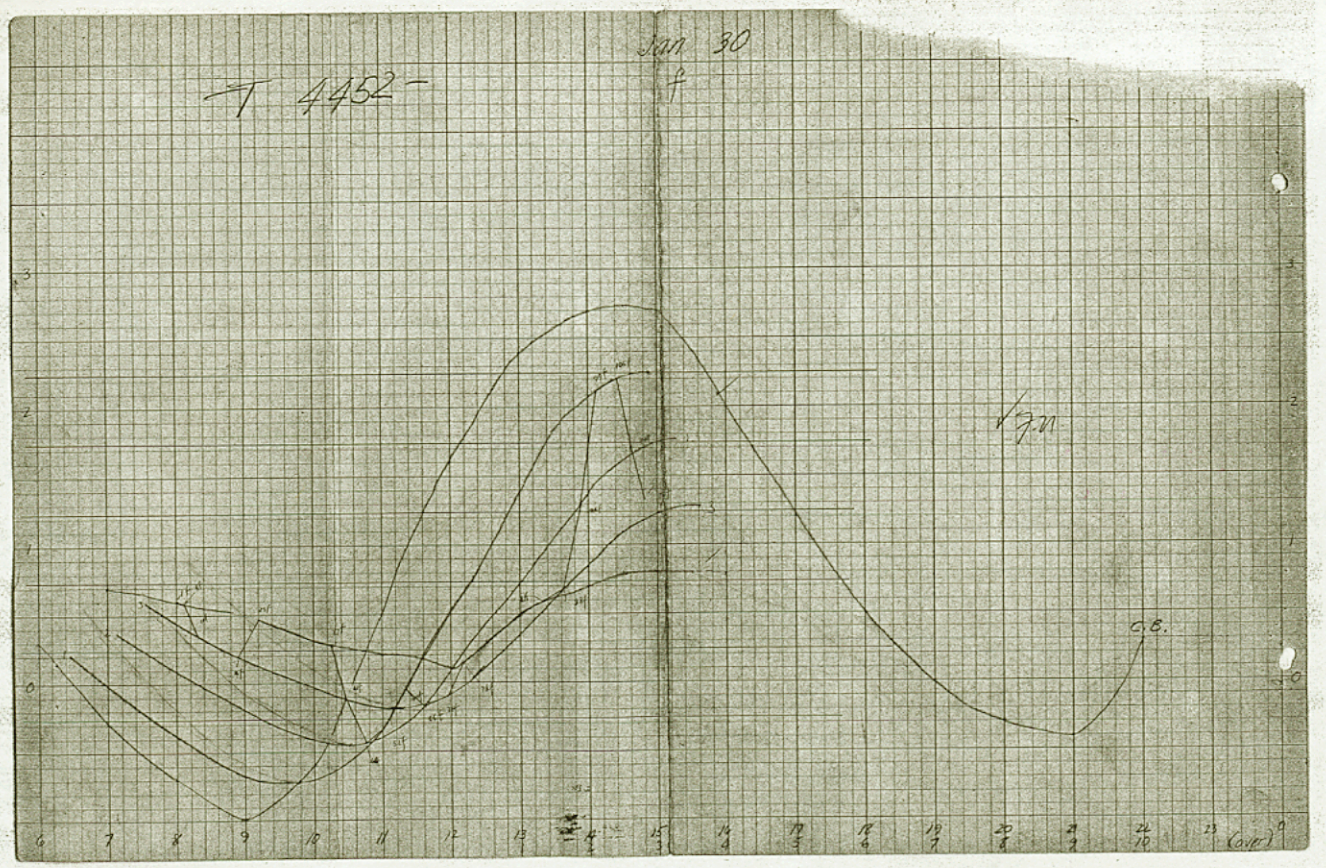
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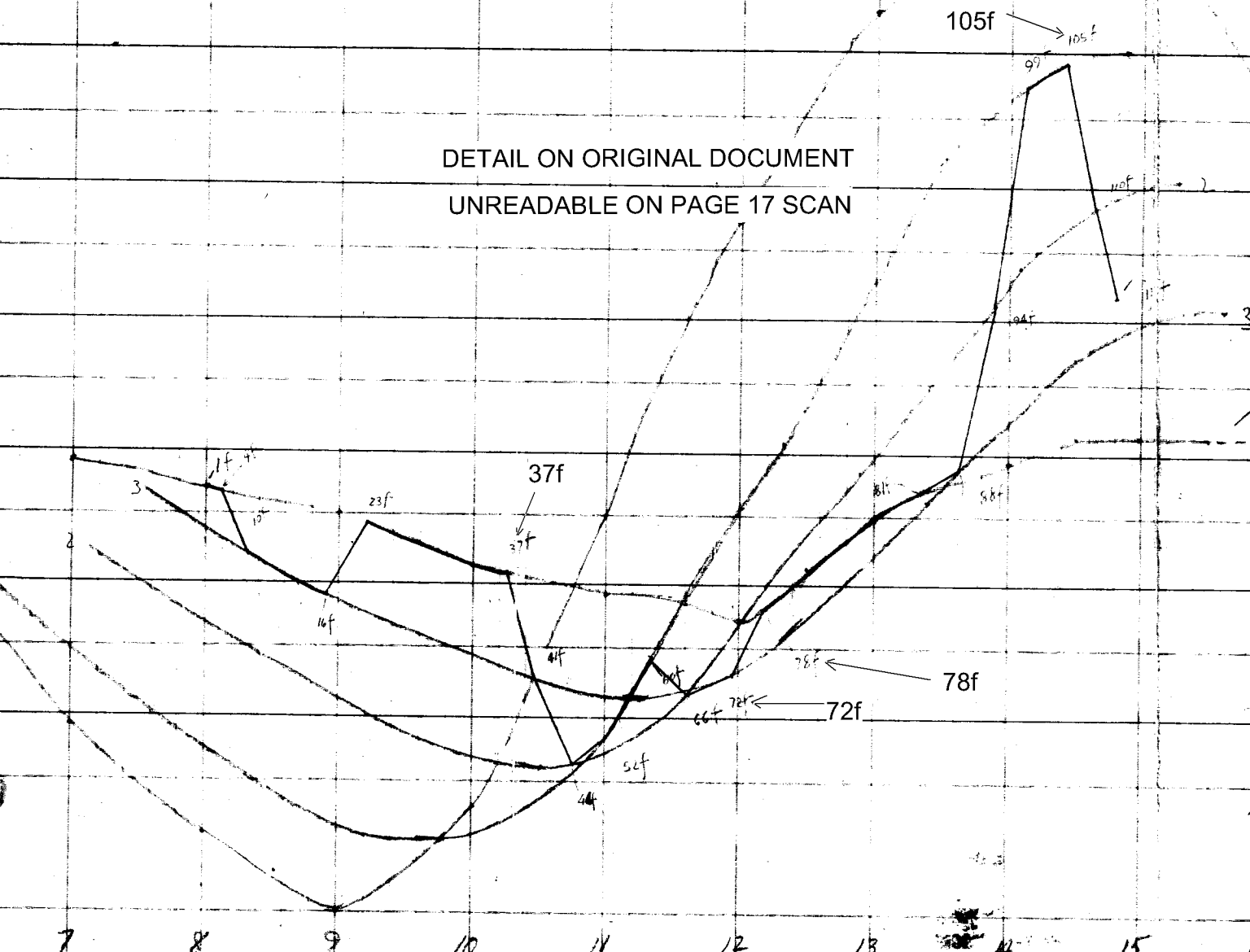
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(FOR FILES OF FIELD RECORDS SECTION)

3

February 2, 1931

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5056

Locality West Coast of Florida (Seminole Pt-Lopez R.)

Chief of Party: B. H. Rigg, in 1930
Plane of reference is mean low water, reading
2.7 ft. on tide staff at Chatham R. Entrance
2.4 ft. below B. M. 1
4.7 ft. on tide staff at Chatham R. (4 miles above entrance)
- No Bench Marks established on account of swamp.

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

R W

Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5056.

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	750
Number of positions checked	206
Number of positions revised	56
Number of soundings recorded	7720
Number of soundings revised	411
Number of signals erroneously plotted or transferred	———

Date: February 20, 1931

Cartographer: Harold W. Murray

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 82-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

July 1, 1931.

SECTION OF FIELD RECORDS

Review of Hydrographic Sheet No. 5056

Seminole Point to Lopez River, West Coast of Florida

Surveyed in 1930

Instructions dated December 6, 1929 (B. H. Rigg)

Chief of Party, B. H. Rigg

Surveyed by B. H. Rigg

Protracted by F. Natella

Soundings plotted by G. E. Morris

Verified and inked by H. W. Murray

In this survey the topography from aerial photographs was to be used as far as practicable for control of the hydrography of a network of narrow crooked channels, navigable only by small boats. As the instructions authorizedadeparture from standard methods of control, in reviewing this sheet the work will be considered from two principal aspects:

1. Its adequacy in carrying out the special instructions,

2. Its adequacy as a complete survey.

As to the first, it is believed the chief of party has fully carried out the intent of the instructions in so far as delineating the main used routes and the depths that can be carried through them. It would have been very desirable, however, if the area at the entrance to Chatham and Heuston Rivers and for a distance up the rivers, had been surveyed on a scale of 1:10,000. This is perhaps the most important area on the entire sheet, and from the triangulation stations at the entrance, additional plane table control could have been established to give this portion of the survey a degree of accuracy comparable to other surveys. The larger scale would have eliminated the congestion that exists in this area and the channels would have been more clearly defined.

As to the second, there are several items that should be considered.

(a) Control - There is no doubt that the control for this survey is decidedly below our normal standards. This, of course, should not be taken as a criticism, for it is fully realized that the

party had numerous, if not insurmountable, difficulties to contend with. It is merely intended as a statement of fact. While numerous signals, at the entrance and in the larger bays, were located by sextant cuts to triangulation stations and well defined topographic features, the greater part of the sheet was controlled by estimated distances, tangent cuts, bearings, compass courses, and in some cases by sketching the path of the boat. While such expedients have occasionally been used on limited portions of a survey, such extensive use is a decided departure from accepted standards. Furthermore, the large variation in the tidal range between the mouth and head of the rivers would require the establishment of subsidiary tide staffs if accurate reductions are to be obtained.

(b) Completeness - The work on this sheet cannot be considered a complete survey. While the main used route has been determined, sometimes by merely a line of soundings in the thread of the channel, there are several bights, lagoons and indentations that have not been surveyed and where it is uncertain what depths can be carried in them. Moreover, in some of the passages where only a single line of soundings was run, the full width of the channel is not indicated nor is it known what depths exist on each side of the channel line. These can be seen by an inspection of the sheet and will not be pointed out here.

(c) Classification of Work - The survey is doubtless adequate for the purpose intended, particularly in view of the relative unimportance of the locality. To survey an area of this character in accordance with the ordinary standards of accuracy would necessitate a needless expenditure of time and money. However, these considerations should not affect the proper evaluation of the work as it stands. Therefore, in view of the items mentioned under (a) and (b) above, it is recommended (reluctantly and for want of a better qualifying term) that this work be considered as reconnaissance. This need not be so stated on the sheet, but the idea should be reflected in any photographic copies of this sheet furnished the public.

(d) Information for Compiler -

(1) Application to chart - Inasmuch as the 80,000 scale chart can only show in a general way the depths in the various bays and passages, the sheet can be applied thereto without hesitancy.

(2) Shoal Areas - The areas that are indicated on the sheet as shoal water with the notation of the reported depth, should be charted as shoal water. The reported depth is included on the sheet because of its possible use to yachtsmen and others that may be interested in obtaining copies of these original surveys. While the information is not absolutely definite, it does add to the general knowledge of the locality.

(3) New Topographic Information and Changes - There are several changes in the topographic features that were noted by the hydrographic party. These are shown in black on the hydrographic sheet and have been added in red to a copy of the topographic sheet (filed with topographic sheet as an "STANDARD" sheet). Where certain features were not found by the hydrographer they are so marked on the topographic sheet. The compiler should therefore refer again to the topographic "STANDARD" sheet before disposing of the chart.

(4) Geographic Names - The names of islands that are shown in red on the hydrographic sheet were so named for convenient reference in the sounding records and should not be mistaken for geographic names.

(5) Oyster Bars - These oyster bars were taken from the topographic sheet. In some places they have been slightly modified by the hydrographic party. The changes were not incorporated on the topographic sheet since it is understood from the chief of party that a complete delineation of these bars is almost an impossibility. Some of these bars bare at high water and some at low water, but no attempt was made to indicate this on the sheet.

(e) Miscellaneous Items -

(1) Crossings - The crossings are generally good, that is, within one foot. There are several lines (noted in Descriptive Report) where the soundings differ from 2-1/2 to 5 feet. These could not be accounted for except that small shoals exist at these places. In such cases the shoal soundings were plotted and should be charted.

(2) Doubtful Reef - At the entrance to Heuston River between positions 10 and 11 G (lat. 25° 41' 770 m., long. 81° 18' 350 m.) a reef is noted in the sounding record. The reef was not indicated on the smooth sheet and the matter taken up with the Chief of Party who is of the opinion that the note referred to the shoal area to the southward of the channel. This explanation has been accepted, but it is recommended that this be investigated if additional work is ever done here. At the same time the entire entrance to the eastward of this questionable reef should be re-examined and the full extent of the 2 foot shoal determined.

(3) Junction with old survey - A comparison has been made with the soundings on H. 2010 (surveyed in 1890). The new survey appears in general to average about 1 foot deeper. No difficulty should be experienced in easing the new survey into the charted soundings.

(4) Signal symbols - The signals that are indicated with red circles on the hydrographic sheet should not be mistaken for plane table determinations. In some cases they represent sextant determinations and in other cases they represent topographic features definitely identified and a signal erected for use on various lines of the survey. It would perhaps have been better to have indicated these with a blue circle when located and a green circle if merely spotted. Where no signals were erected, but a certain point used for referring boats' positions, there are indicated by a red dot with a name in red.

Reviewed by A. L. Shalowitz, March, 1931.

Conclusion -- The survey and charting of narrow crooked channels used by small boats is a difficult problem, because a complete survey requires more time and expense than the importance of the area warrants, and charting on a scale large enough to show the details is objectionable not only because of the work involved in preparing the large number of charts required, but also from the standpoint of the user. In this area the preparation of copies of these hydrographic sheets showing the topography and a selection of soundings would probably answer the needs of boats using these channels. For such a substitute for a complete chart and for charting on the 1:80,000 charts, the survey is adequate, but for the preparation of large scale charts the survey can hardly be considered adequate.

A. M. Sobieralski
Chief, Field Records Section

Approved:

A. M. Sobieralski
Chief, Field Records Section

F. S. Borden
Chief, Field Work Section

Chart 1253 John P. Wells 1/13/64 Applied to inset after verification and review.

Cht 642-SC A J Sunday 7-15-67 Fully appd. after verification & review.